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Published:
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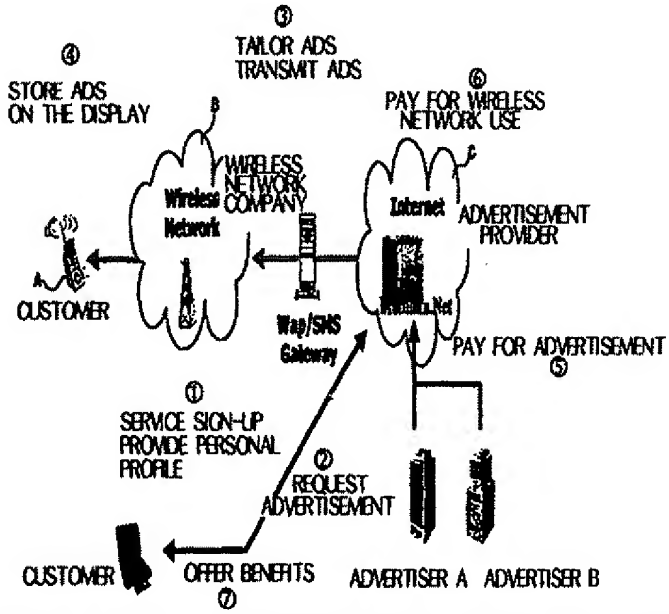
(54) Title: AN ADVERTISEMENT METHOD USING MOBILE COMMUNICATION



(57) Abstract: The present invention relates to an advertising method using a mobile terminal. The advertisement method comprises user's sign-up stage (S1), advertisement request stage (S2), advertisement transmitting stage (S3), advertisement receiving and storing stage (S4) and benefits offering stage (S5). The advertisement can be displayed on the display of mobile terminal with various forms such as a text, multimedia and image following such steps. The advertisement can be also displayed on the whole or part of the display of the mobile terminal.

WO 01/71949 A1

AN ADVERTISEMENT METHOD USING MOBILE COMMUNICATION

TECHNICAL FIELD

The present invention relates to an advertising method using mobile terminals by storing advertisement image transmitted through wireless network in mobile terminals as a background on the display thereof. More particularly, the present invention relates to an advertising method which provides advertisers with maximum advertising effects and users with certain kind of benefits in return for receiving various kinds of advertisement such as text, multimedia or images on the whole or part of the display.

BACKGROUND ART

At present, only text or voice messages through internet or wireless network have been used as advertisements in the mobile terminals. Each mobile communication company merely offers information and advertisements by sending text or voice messages to randomly chosen customers. Such system might bring about lack of integration in providing information. One drawback of sending advertisement unilaterally to randomly chosen customers without analysis of customer demographic characteristics is that the effects of the advertisement are indefinite. Hence, there is need for advertisers to be able to reach target customer group for target marketing.

DETAILED DESCRIPTION OF THE INVENTION

According to this invention various types of advertisements, for example, in the forms of text, multimedia or image are shown on the whole or part of the display of mobile terminals. The object of the present invention is to provide an advertisement method by which an advertiser maximizes advertising effect and a user, a customer, obtains certain kind of benefits in return for receiving advertisement.

Defining target potential customer group accurately by implementation of this invention allows an advertiser to perform target marketing for the goods and services. It is expected that various effects such as measuring advertising effects promptly and precisely can be provided. Meanwhile, it is evident to those skilled in the art that numerous alterations and modifications may be made without departing from the inventive concept and scope described herein. Advertisement can be transmitted not only to user's mobile terminals through wireless network but also to end users accessing to the web site by e-mail.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic diagram of advertising system using mobile terminals in the present invention;

Fig. 2 illustrates the functional structure of advertising system using mobile terminals in the present invention;

Fig. 3 depicts the process of advertising system using mobile terminals in the present invention.

Fig. 4a and Fig. 4b are flow charts illustrating that the users agree to receive advertisement using mobile terminals in accordance with the present invention;

Fig. 5a and Fig. 5b are flow charts illustrating that the advertisers request for providing advertisement distribution using mobile terminals in accordance with the present invention;

Fig. 6a and Fig. 6b are flow charts illustrating that the advertisement is transmitted and that the advertisers pay for the advertisement in accordance with the present invention;

Fig. 7a to Fig. 7d are examples of advertisement displayed on the mobile terminal in accordance with the present invention; and,

Fig. 8a and Fig. 8b are flow charts illustrating that the users obtain benefits in return for receiving advertisement in accordance with the present invention.

BEST MODE FOR CARRYING OUT THE INVENTION

According to the present invention, the advertisement using mobile terminals comprises at least following stages. In the user's service sign-up stage, users, potential customers, access to the advertisement provider's web site, provide personal profile by filling in a registration form and agree to receive advertisement. Then, the advertisement provider authenticates the users. In the advertisement request stage, advertisers access to the advertisement provider's web site, specify terms of target customer group, consult the types, scales and costs for various advertisements with the advertisement provider on the wire/wireless communication. Then, the advertisers request proper advertisement for the goods and services. In the advertisement transmitting stage, the advertisement provider extracts the target

customer group, tailors advertisement to the target customers' needs and transmits advertisement thereto though the wireless network. In the advertisement receiving and storing stage, mobile terminals receive, store and show the advertisement on the display. In the benefits offering stage, the advertisement provider offers the users certain types of benefits such as reserves or reduction of phone charge.

The user's service sign-up is realized by three methods of internet using Hyper Text Protocol/Common Gateway Interface (HTTP/CGI), mobile terminal using Wireless Application Protocol/Common Gateway Interface (WAP/CGI) and both of internet and mobile terminal using HTTP/CGI and Wireless Application Protocol push/ Short Message Service (WAP push/SMS) and CGI.

Database server is utilized in matching between advertisement and target customers and in extracting target customer group in the advertisement request.

Advertisements are transmitted by data transmitting method of using Signaling System 7 (SS7) protocol, push service defined by WAP protocol, push service defined by other protocol except WAP, or storing method following downloading by pull service.

An encoded text or image is transmitted in order to diminish traffic in the wireless network and a decoded text or image is stored and displayed on the display of mobile terminal A in receiving and storing advertisement. Standard image format, standard multimedia format, software in mobile terminal and hexa code can be used in storing and displaying advertisement.

These and other features and advantages will become better understood by reference to the following detailed description of presently preferred exemplary

embodiments in conjunction with the accompanying drawings.

Fig. 1 is a schematic diagram illustrating advertisement system using mobile terminals, Fig. 2 depicts a functional structure of advertisement system using mobile terminals, and Fig. 3 illustrates stages of advertising method thereof.

With reference to Fig. 1, Fig. 2 and Fig. 3, an advertisement is transmitted through wireless network B to a mobile terminal A, is stored in the display of the mobile terminal A and is exposed to the user, a potential consumer. This system may maximize the advertisement effects.

The user's service sign-up stage S1 is realized according to the following description. A user, a potential customer, accesses to the advertisement provider's web site C, clicks log-in menu, provides personal profile and agrees to receive advertisement through wireless network B. Then, the personal profile is stored in the web site database server E and the user is authenticated.

Referring to Fig. 4a and Fig. 4b, a user may sign up the web site through internet or mobile terminal A respectively, or through both internet and mobile terminal A. In case of using both internet and mobile terminal, authentication message is transmitted to mobile terminal A.

Hyper Text Transfer Protocol/ Common Gateway Interface (HTTP/CGI) is used in transmitting through internet, Wireless Application Protocol/ Common Gateway Interface (WAP/CGI) is used in transmitting through mobile terminal A, and HTTP/CGI and WAP/CGI are used at a time in transmitting.

WAP is useful in an application operating on the wireless network B and in developing advertisement service. Short Message Service (SMS) is means of

transmitting and receiving short messages between users of personal computers, internet and mobile terminals. Signaling System 7 (SS7) is a reliable architecture protocol controlling demanded particulars of present communication easily and has capacity of accepting extension of a new application in the future.

In accordance with Fig. 5a, on-line advertising request S2 is settled by the following description. An advertiser directly accesses to the web site through internet and specifies terms of target customers. Then an advertiser determines size of target customer group, confirms costs in requesting the advertisement and pays for the advertisement

Off-line request for advertisement S2 is another way as shown in Fig. 5b. An advertiser inquires about the advertisement on the wire/wireless communication, consults the size of the target group, costs for the advertisement with the advertisement provider, requests proper advertisement for goods and services and pays for the advertisement.

In addition, database server E comprised of customer resource, service resource, system resource and advertisement is utilized in searching and extracting target customers.

As shown in Fig 6a of advertisement transmitting S3, an advertisement provider extracts the target customer group, tailors advertisement to the target customer's needs and transmits advertisement thereto through the wireless network.

In the advertisement transmitting stage S3, one of data transmitting methods of using SS7 protocol, push service defined in WAP protocol, push service defined in other protocols except WAP, or storing method following downloading by pull service can be used.

In receiving and storing advertisement stage S4, an encoded text or image is transmitted in order to diminish traffic in the wireless network and a decoded text or image is stored and displayed on the display of mobile terminal A.

Standard image format and standard multimedia format, software in mobile terminal and hexa code are used in storing advertisement S4.

As shown in Fig. 7a to Fig. 7d, various contents of advertisement can be illustrated in various forms of stopped image, multimedia banner or banner using color Liquid Crystal Display (LCD) on the whole or part of the display of mobile terminals A.

In benefits offering stage S5, the advertisement provider offers the user certain kind of benefits such as reserves or reduction of phone charge.

In Fig. 8a, whenever a user receives advertisement transmitted to the user's mobile terminal, reserves such as electronic money or cash is generated, saved up to the certain amount and transferred to the user's bank account. Another example of offering benefits is depicted in Fig. 8b. Whenever a user receives advertisement, a Call Detail Record (CDR) by data logging is generated. The wireless network company pays for phone charges or network use charges corresponding to the number of advertisements for the user. Therefore, the user obtains reduction of phone charges or network use charges.

Meanwhile, In Fig. 1 and Fig. 6a, the advertisement provider operating the web site pays network use charges to wireless network company.

Application server D, described in the above functional structure of advertising system of this invention, consists of various interface or component shown in Figs. and is connected to database server E.

WHAT IS CLAIMED IS :

1. An advertising method using mobile terminal, which comprises:

user's sign-up stage S1 for the service by accessing to the web site C, providing personal profile, agreeing to receive advertisement, and being authenticated;

advertiser's request stage S2 for the advertisement tailored to target customers' needs by accessing to the web site C, consulting and determining particulars on the advertisement;

advertisement transmitting stage S3 in which an advertisement provider extracts the target customer group, designs and transmits the advertisement through wireless network B;

advertisement receiving and storing stage S4 in which an mobile terminal receives and stores the advertisement as a background of the display of the mobile terminal A; and,

benefits offering stage S5 in which an advertisement provider offers certain kind of benefits such as reserves or reduction of phone charges in return for receiving the advertisement.

2. The method as in claim 1, wherein user's service sign-up stage S1 comprises one of transmitting methods of internet using HTTP/CGI, mobile terminal A using WAP/CGI or both internet and mobile terminal A using HTTP/CGI, WAP Push/SMS and CGI.

3. The method as in claim 1, wherein advertiser's advertisement request stage S2 includes using database server E in searching for extracting target customer group.

4. The method as in claim 1, wherein advertisement transmitting stage S3 includes one of transmitting methods of transmitting method using SS7 protocol, push service defined in WAP protocol, push service defined in other protocols except WAP or storing method following downloading by pull service.

5. The method as in claim 1, wherein advertisement receiving and storing stage S4 features that encoded advertisements are transmitted for diminishing traffic in the wireless network B and decoded advertisements are stored on the display of mobile terminal A.

6. The method as in claim 1, wherein advertisement receiving and storing stage S4 features that image transmitted in standard image format, multimedia transmitted in standard multimedia format, multimedia by software program in mobile terminal and other forms of advertisement using hexa code may be shown on the whole or part of the display of mobile terminal A.

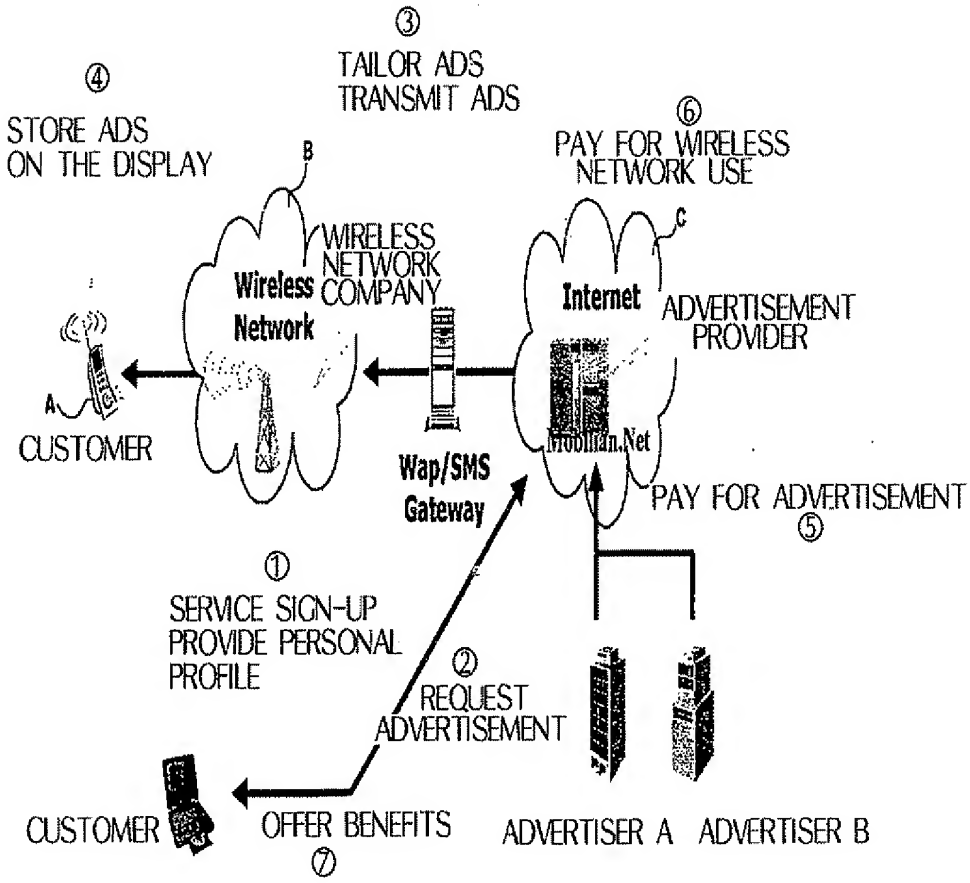

③
TAILOR ADS
TRANSMIT ADS
④
STORE ADS
ON THE DISPLAY
⑥
PAY FOR WIRELESS
NETWORK USE
B
C
WIRELESS
NETWORK
COMPANY
Wireless
Network
Internet
ADVERTISEMENT
PROVIDER
A
CUSTOMER
Wap/SMS
Gateway
PAY FOR ADVERTISEMENT
⑤
①
SERVICE SIGN-UP
PROVIDE PERSONAL
PROFILE
②
REQUEST
ADVERTISEMENT
CUSTOMER
OFFER BENEFITS
⑦
ADVERTISER A
ADVERTISER B

Fig. 1

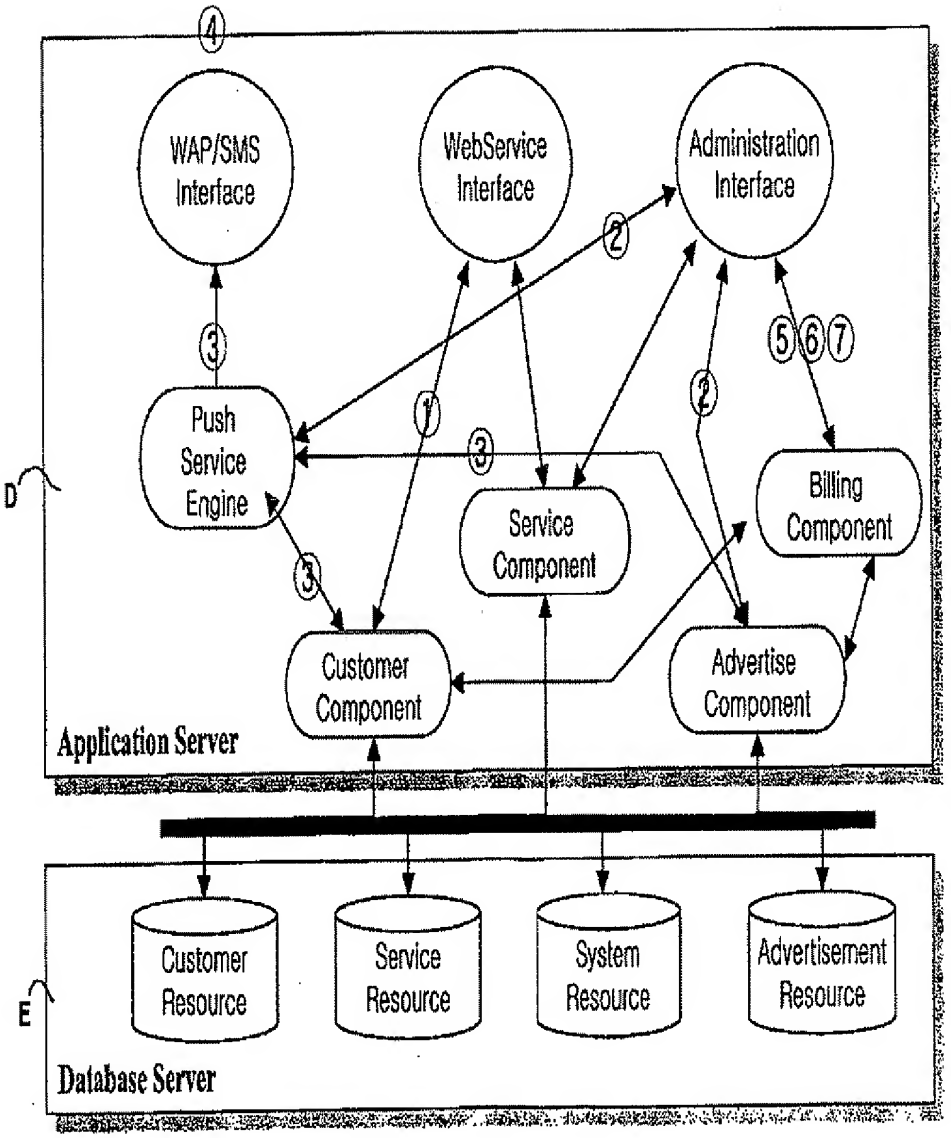

4
WAP/SMS Interface
WebService Interface
Administration Interface
2
3
5 6 7
Push Service Engine
1
3
2
Billing Component
Service Component
3
Customer Component
Advertise Component
D
Application Server
Customer Resource
Service Resource
System Resource
Advertisement Resource
E
Database Server

Fig. 2

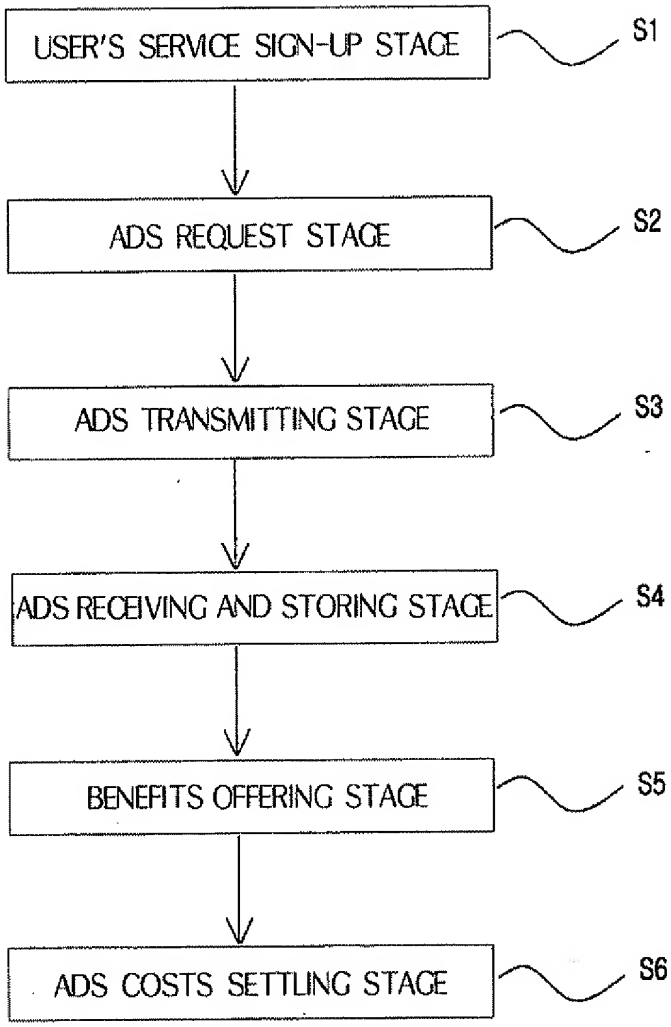
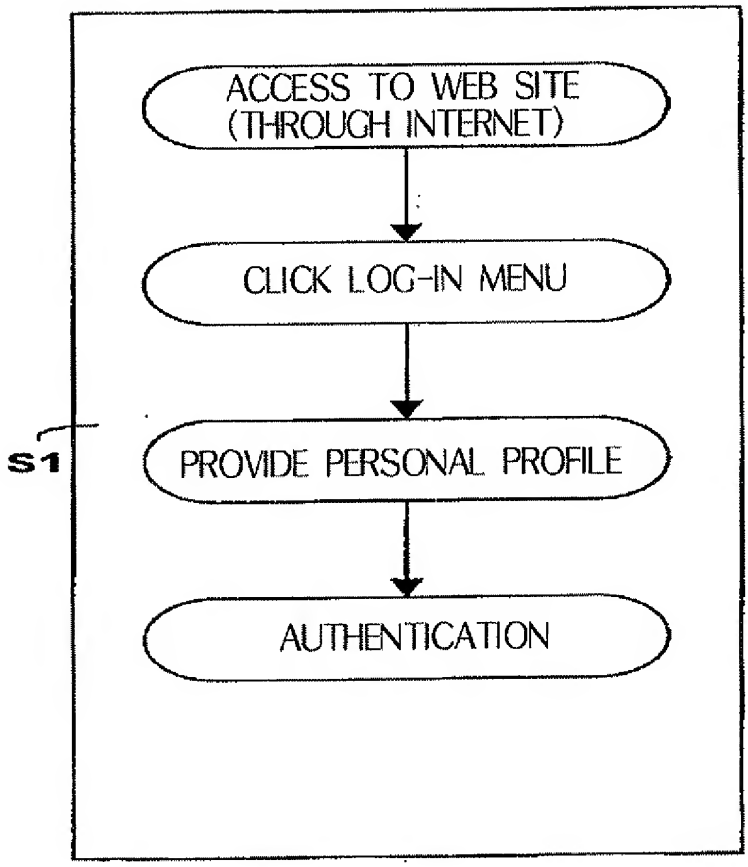
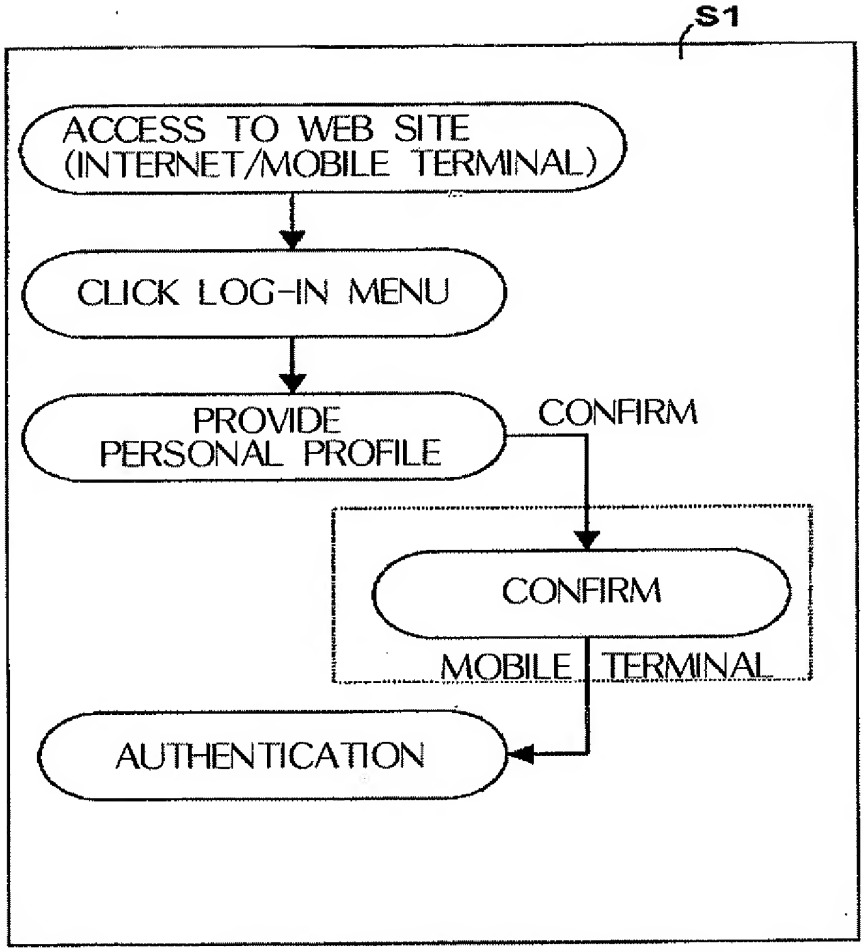

USER'S SERVICE SIGN-UP STAGE
S1
ADS REQUEST STAGE
S2
ADS TRANSMITTING STAGE
S3
ADS RECEIVING AND STORING STAGE
S4
BENEFITS OFFERING STAGE
S5
ADS COSTS SETTLING STAGE
S6

Fig. 3



USER'S SERVICE SIGN-UP THROUGH INTERNET

Fig. 4a



USER'S SERVICE SIGN-UP THROUGH
INTERNET AND MOBILE TERMINAL

Fig. 4b

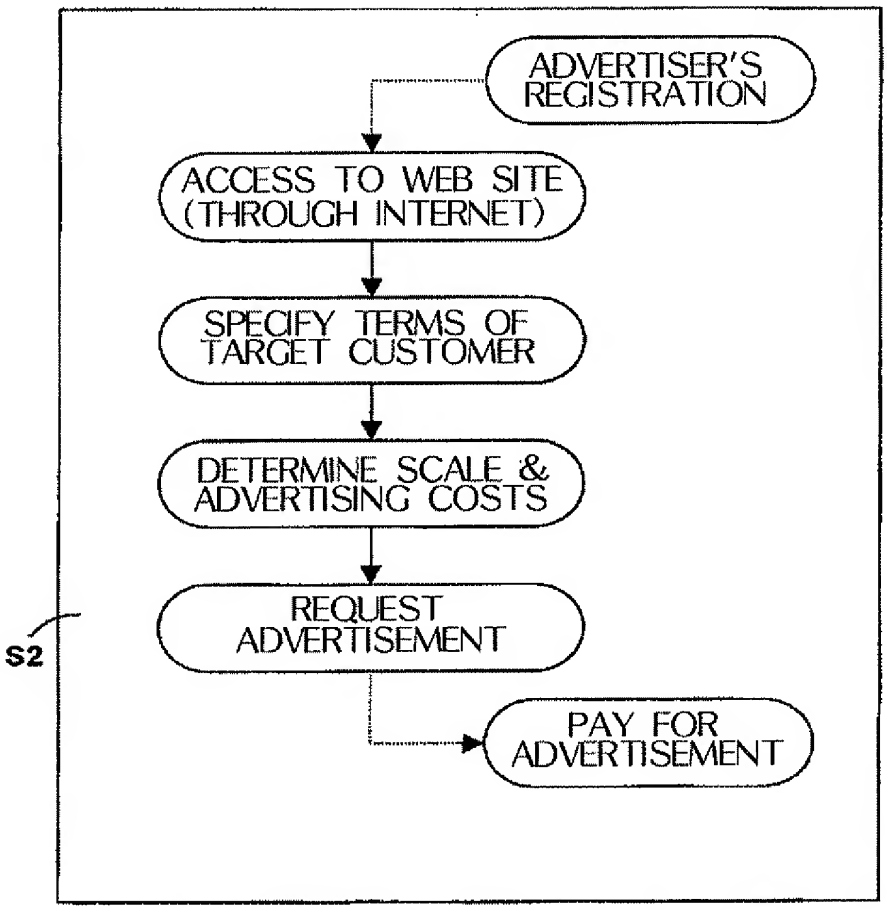

ADVERTISER'S REGISTRATION
ACCESS TO WEB SITE (THROUGH INTERNET)
SPECIFY TERMS OF TARGET CUSTOMER
DETERMINE SCALE & ADVERTISING COSTS
REQUEST ADVERTISEMENT
S2
PAY FOR ADVERTISEMENT
ON-LINE ADVERTISING REQUEST

Fig. 5a

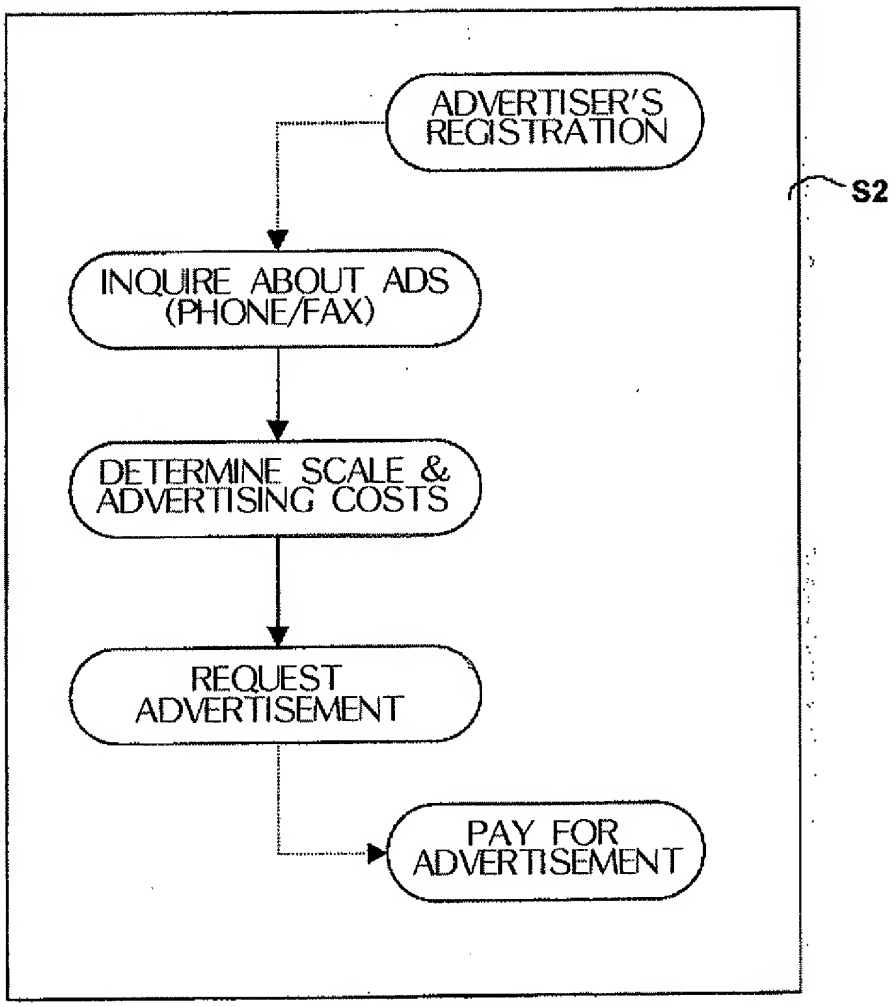

ADVERTISER'S REGISTRATION
S2
INQUIRE ABOUT ADS (PHONE/FAX)
DETERMINE SCALE & ADVERTISING COSTS
REQUEST ADVERTISEMENT
PAY FOR ADVERTISEMENT
OFF-LINE ADVERTISING REQUEST

Fig. 5b

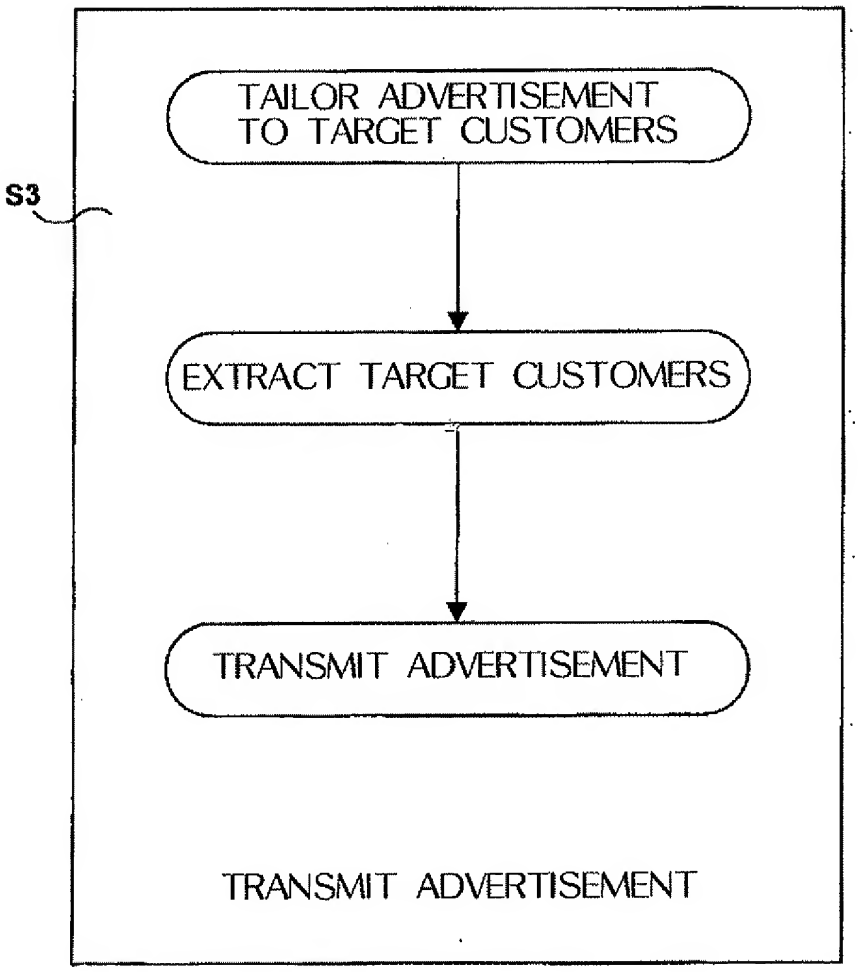

S3
TAILOR ADVERTISEMENT TO TARGET CUSTOMERS
EXTRACT TARGET CUSTOMERS
TRANSMIT ADVERTISEMENT
TRANSMIT ADVERTISEMENT

Fig. 6a

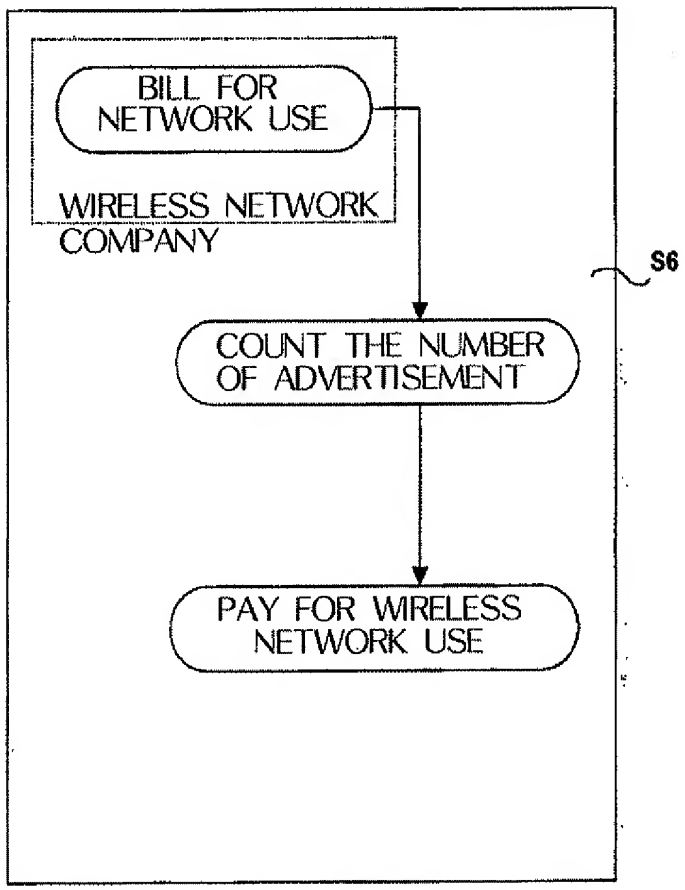

BILL FOR NETWORK USE
WIRELESS NETWORK COMPANY
S6
COUNT THE NUMBER OF ADVERTISEMENT
PAY FOR WIRELESS NETWORK USE
SETTLEMENT OF ADVERTISEMENT RATE

Fig. 6b

Fig. 7a

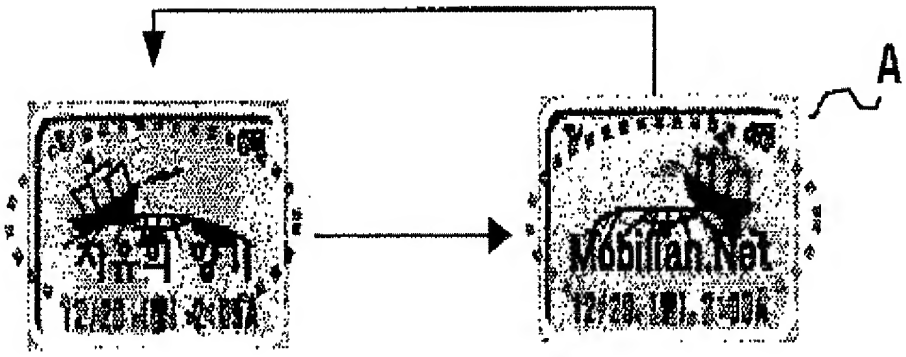


Fig. 7b

Fig. 7c

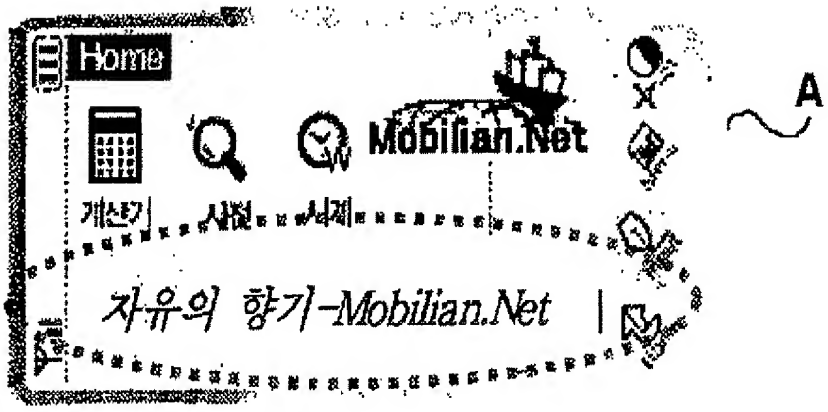


Fig. 7d

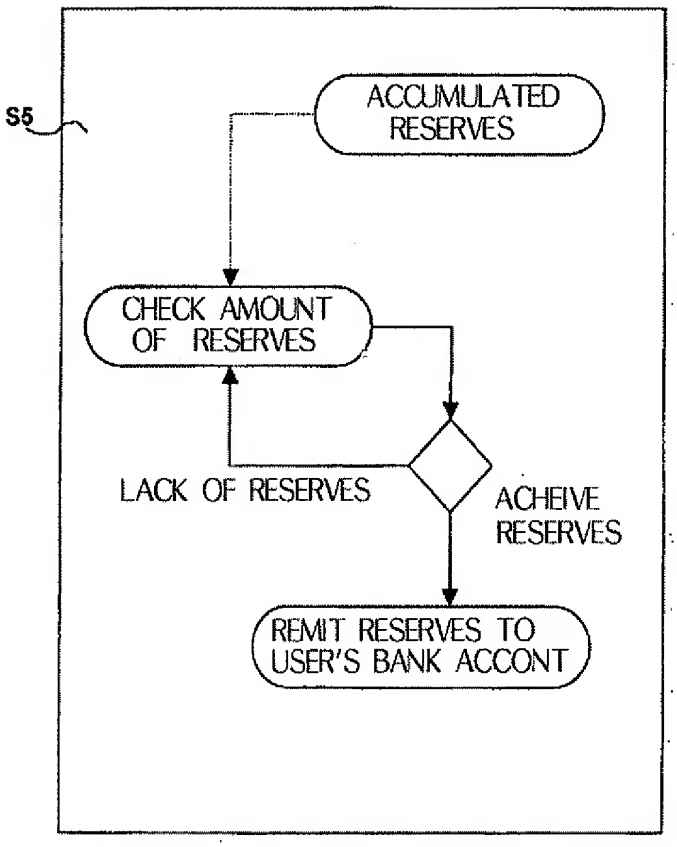
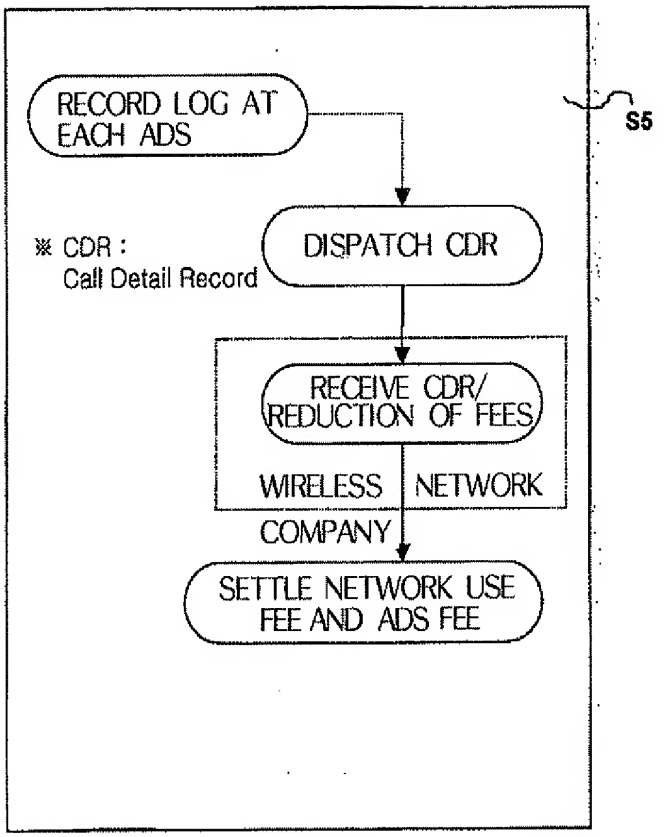

S5
ACCUMULATED RESERVES
CHECK AMOUNT OF RESERVES
LACK OF RESERVES
ACHEIVE RESERVES
REMIT RESERVES TO USER'S BANK ACCONT
BENEFITS OFFERING THROUGH RESERVES

Fig. 8a



BENEFITS OFFERING THROUGH REDUCTION OF FEES

Fig. 8b

INTERNATIONAL SEARCH REPORT

tional application No.
PCT/KR00/00231

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H04B 7/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC7 H04B 1, H04B 7, G06F 17

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

Korean Patents and Applications for inventions since 1975
Korean Utility models and Applications for Utility models since 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search trerms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 99-46605 A (LG Corp.) 05 July 1999 See the whole documentKR 99-78649 A (Moon Il-Joo, Kang Sung-Woo)	1-6
Y	KR 99-78649 A (Moon Il-Joo, Kang Sung-Woo) 05 November 1999 See the whole document	1-6
Y	KR 99-78910 A (Kuon Chang-Suk) 05 November 1999 See the whole document	1-6
A	KR 99-55482 A (LG Corp.) 15 July 1999 See the whole document	1-6
A	KR 99-47244 A (LG Corp.) 15 September 1999 See the whole document	1-6

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevence
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 DECEMBER 2000 (15.12.2000)	15 DECEMBER 2000 (15.12.2000)

Name and mailing address of the ISA/KR
Korean Industrial Property Office
Government Complex-Taejon, Dunsan-dong, So-ku, Taejon
Metropolitan City 302-701, Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer
YOON, Byoung Soo
Telephone No. 82-42-481-5709

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR00/00231

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 99-46605 A	05. 07. 1999	None	
KR 99-78649 A	05. 11. 1999	None	
KR 99-78910 A	05. 11. 1999	None	
KR 99-55482 A	15. 07. 1999	None	
KR 99-47244 A	15. 09. 1999	None	